UNITED STATES PATENT OFFICE.

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HAT-SEWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 684,176, dated October 8, 1901.

Application filed March 8, 1900. Renewed February 28, 1901. Serial No. 49,300. (No model.)

To all whom it may concern:

Be it known that I, HELEN A. BLANCHARD, a citizen of the United States of America, residing in the city and county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Sewing-Machines, of which the following is a specification.

My invention relates to sewing-machines making a common chain-stitch with one thread; and it is adapted to sew the sweat-band into hats and onto a strip of linen or other material which has been basted on the inner edge of the hat.

Heretofore the sweat-bands in hats were sewed onto the basted strip by hand; and the object of my invention is to do this by machine, thereby reducing the cost of hats and producing a uniform and better fastening of the sweat-band to the basted strip of the hat. In providing a machine for such work special care must be taken that the felt edge of the hat is not injured by the stitching mechanism of the machine, and the sweat-band must be properly guided with respect to the basted strip, which generally contains a wire, and both the hat and sweat-band must be properly fed and supported. It is of great importance to produce a stitch which in appearance is like the hand-made stitch used in sewing the sweat-band to the basting-strip, because no loop or interlacing of the single-thread stitch is visible on the exposed face or edge of the sweat-band, a single thread only lying on the face of the strip and appearing like a double thread wound spirally around the edge of the said strip. The single-thread overseam-stitch commonly known is different from the stitch produced by my machine in that the former has the loops on top of the fabric, while in the stitch produced by my machine the loops are on the under side of the fabric. For this purpose the thread-carrying stitching-needle is secured to an arm hinged above the cloth-plate, the needle operating from below and at the outer edge of the sweat-band, and a thread-looper located above the cloth-plate and adapted to take a loop from the thread-carrying needle and present the same to a vertical stitching-needle, which penetrates the material and only pushes the loop through the goods into reach of the thread-carrying needle.

Figure 1 is a front elevation of my sewing-machine, showing the stitching mechanism, comprising a lower sewing-needle carrying the thread, a thread arm or looper, and a notched sewing-needle, a hat-support, and the means for operating the various mechanisms. Fig. 2 is a section on the line 2 2 of Fig. 1, showing the lower sewing-thread-carrying needle, the thread-looper, the upper sewing-needle, the feed, and presser-foot. Fig. 3 is a section on the line 3 3 of Fig. 1, showing the means for operating the stitching mechanism and feed from a main shaft. Fig. 4 is a section on the line 4 4 of Fig. 1, showing the means for operating the feed. Fig. 5 is a plan view of the cloth-plate, showing the needle-plate and feed. Fig. 6 is a perspective view of the presser-foot, stitching mechanism, and guides for the needles and sweat-band to be sewed. Fig. 7 is a section showing the respective positions of the felt hat, linen strip basted thereon and containing a wire, the sweat-band, and the guide for the latter. Figs. 8, 9, and 10 show the stitch and various relative positions of the stitching mechanism.

Referring now to the drawings for a further description of my invention, A is the machine-arm, supported on a table *a*. This arm is provided with two bearings a', in which a shaft B, driven by a belt-pulley *b*, is journaled. On a depending bracket a^2 is fixed the cloth-plate *c*, and in line therewith, toward the left end, is a movable support a^3 for the hat-rim, which is held in place by a hand-screw a^4 to the guide-block a^5 on the arm A.

The stitching mechanism comprises a lower thread-carrying stitching-needle *n*, held in an oscillating needle-arm N, an upper needle *u*, having a thread-engaging notch adapted to engage and force a thread through the goods and secured to a vertical needle-bar u', and a thread-looper *t*, hinged to a rock-shaft t' and adapted to take a loop from the lower needle *n* and present the same to the vertical needle *u*. The lower needle *n* is curved and fastened in the free end of the oscillating arm N by the screw n'. The arm N is pivoted, by